

AGRICULTURAL MUSEUM.

OMNIS FERET OMNIA TELLUS.

VIRG.

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For the Agricultural Museum.

ON THE CULTURE OF FLAX.

HAVING observed several articles in the Museum, on the Cultivation of Hemp, and its preparation by the Agriculturalists to render it marketable, I send you in detail the Management of the Flax Crop in the North of England. Whether the same course is pursued there, with that followed by the Irish, or in Germany, I cannot say—or even whether the one I have observed be among the best; yet, as it is followed in a district of country where the manufacture of linen (particularly the strong and serviceable kind) is carried on to a considerable extent, it may therefore be not unacceptable to some of your readers.

A deep and rich loam, or that kind of soil which often marginates rivers, and appears to have been formed by the deposition of their waters, is generally preferred to all others for this crop ; and indeed it is seldom found to answer the farmers expectation when sown upon other land. Land which has lain for some years in grass is accounted the best ; it is not unfrequently, however, sown upon arable land, when the soil is good, dry, and friable, and free from weeds. The kind cultivated is the linum usitatissimum, and of that variety termed the blue or lead coloured. Whether sown upon land that has been in grass, or upon wheat stubble, it seldom receives more than one ploughing ; altho' good management would direct that if sown on arable or cultivated land, it ought to be well pulverized and freed from weeds by a previous fallow. The land is seldom if ever manured immediately for this crop, probably from the fear of introducing a fresh stock of weeds so detrimental

and injurious to it. The time of sowing is May, the particular time depending much upon the season, and state of the soil, which should neither be wet nor dry, but when the surface can be reduced as fine as that of a garden bed; every clod the size of an egg ought to be broken, for much of the value of the crop depending on the regularity of the seed vegetating, too much attention cannot be had to weed on putting it in. Two bushels of seed are usually sown upon an acre—the seed covered by the harrow, and in some cases, the larger lumps or clods, are by garden or hand-rakes drawn into the furrows. Weeding is an operation which ought to be, and there, is carefully performed, and on which much depends; hence the care as to the state the land is in, which is sown with the crop. A dry season after sowing, sometimes causes the plants to come up in two crops, in which case, or when by mismanagement the crop is too thin on the ground, it is irreparably injured; for such is the nature of this plant, that wherever it stands uncrowded, at the root, wherever it raises its head above others which surround it, it shoots out lateral branches, and loses its upward tendency. The goodness of the crop on the contrary, depends upon the plants rising evenly with only one stalk or stem, from the root to the seed; for at whatever height it ramifies, there the length of the *line* or flax fibre terminates; the branches being worked off in dressing. A full and even crop upon the ground, is therefore desirable, to obtain which every due precaution is taken, such as sowing a full quantity of seed, harrowing the land fine, and breaking those clods, which cause the seeds that fall upon them to rebound, and form a circle round it, leaving a vacancy in the centre, which encourages an early ramification in the plants. Hence, arises the disadvantages from a second vegetation, where those plants which are most forward, overtop the others, shoot out their side branches, which injure the under growth, as well as the plants which bear them. The young plants being very tender, and liable to

be injured by Spring frosts, will cause the Cultivator to be more attentive to the advance of the Season, than the *time* of sowing; judging, as it is prudent in many other cases, by the progress of vegetation in trees, or shrubs which are slow in foliating. Should not the crop of Flax promise well at the time for weeding, the farmer seldom bestows that expence upon it; believing it better to sow the ground in Turnips, or some other crop, which the season admits of being substituted in lieu thereof.

The flax crop is there usually fit for pulling towards the end of the month of July, or early in August, somewhat depending on the quality of the Flax wanted. The *line* being best when the Flax is pulled after the seed is completely formed, but before it is ripe. If the Flax is suffered to stand until its seed is matured, it is of an inferior quality; the fibre is harsh, and the linen manufactured from it neither bleaches with the same facility, nor acquires the same degree of whiteness with that pulled earlier.

They reap, or more properly *pull* the Flax, by grasping the full sized plants in one hand near the top, and, either pulling them up, or breaking them off near the roots; the other hand receives the handfuls as pulled, until as much is gathered as both hands can hold. Some of the short or underling Flax is then pulled, and formed into a band for binding these small sheaves. After this the small sheaves are collected together and carried to the watering pit, in which they are completely immersed and trodden down, after which they are covered with sods or turf of grass, or any thing which will admit of being loaded, for the purpose of keeping the Flax covered by water. This is a process which requires great care and management, for if it is suffered to rise above the surface of the water, the quality of the Flax is considerably injured. The time which they suffer Flax to lie in the pit depends on the state of the weather, the kind of water, or other circumstances. It must lie until the stem is rotten, but whilst the fibre of the bark remains uninjured, which requires frequent trials or

handlings, and, as it is said, much skill to ascertain: indeed they say that long practice alone can enable a person to judge correctly on this point. In that climate however the steeping usually continues about ten days; sometimes extending to a fortnight.

From the pit in which it has been steeped, the Flax is removed to a meadow, from which the grass has been recently cut, where the sheaves are untied and the Flax evenly spread, so as to cover about as much ground as it was raised upon. Here it is suffered to lay until the woody substance of the stem, separates freely from the filaments of the Flax, the latter remaining uninjured. Hence this process termed "rating" like that of steeping depends much upon the weather, requiring the daily observation of an experienced Flax grower, to ensure the maximum of success. Should the weather be unfavorable to the drying of the Flax when sufficiently rated, which is frequently the case in that moist climate, it is gathered into small conical heaps, resting on its butt or bottom ends to dry. After this is effected, it is carried to the barn or other place where it is secured from the weather.

In preparing the Flax for the market it is necessary to separate the woody part from the filament, or exterior covering of the plant, of which the Flax consists. This is by an operation termed swingling, well known in countries where Flax is raised. In the part of England referred to, it is generally performed by persons following it as a business, and who travel from place to place for that purpose; and as they are generally well skilled in the quality of the article; they are also employed by the farmers to superintend both the "steeping and rating" of the crop. To effect this process of swingling, the stubborn stems are first mangled or broke in an instrument called a break; after which the woody part is separated from the long fibre by beating it over the edge of a stout board or slab, with a kind of wooden broad axe or sabre, formed instrument; and from time to time drawing out the tow, or broken filaments by means of a

coarse heckle. By this alternate use of the swingling knife, and heckle, most of the woody fragments, there called shive or shivers, are got out, part of the tow or broken filament removed, and the article got into a state, fit for the Flax dresser and folded into bundles for sale.

FRANKLIN.

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Wheat has for many years been a very considerable article of husbandry in the United States. Its importance is daily becoming more manifest—the culture of Tobacco is every where giving way to it.—It must, therefore, be highly advantageous to the Farmer to obtain every information that will tend to render his labours most effectual. With this view the following letter and observations on the diseases of wheat, are selected from the Farmers Magazine.

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ON THE DISEASES OF WHEAT.

SIR

The unfavorable idea entertained by Sir John Sinclair, in the result of his inquiries respecting the causes of mildew and other diseases in wheat, in so far as the same are attributed to the heavy manuring and full seeding of the ground, occasions me to trouble you with this letter.

It may justly be considered as a truism, that he who sows sparingly, will reap sparingly; and whatever ideas may be entertained, in theory, respecting muck, it has, in practice, been invariably found the great desideratum for rendering fields permanently fertile. Lime, marl, shelly sand, and all calcarous substances, have powerful effects on their first application; but when repeated, unless accompanied with vegetable manure, prove but feeble enrichers of exhausted ground; and accordingly, it is an object of the first importance with every practical farmer, to increase the quantity, and improve the quality of this most valuable article, as

much as possible. As every essential good may be perverted to a bad purpose, there is no doubt that excess in dung or seed has at times proved hurtful; but where one acre suffers from getting too much of either; a hundred acres suffer from receiving too little. It must be obvious to every attentive observer, that, were the manure labour and seed, which, in a large proportion of the country, are stretched over too great a breadth of ground, confined to two thirds and, in many places, to one half of the extent, the fields would be much more productive than they are; and it is owing to the over frugal manner in which manures of all sorts are generally administered, that so many weak crops, or rather effigies of crops appear, and lands revert so rapidly to their former unproductive state.

As the disorder which befel the wheat crop of last season was uncommonly striking and severe, it is no wonder that the feelings of true patriotism were roused, and every possible method tried to investigate the cause of the evil, and to find out an antidote against its malignant attacks in future. In such cases, however, great caution is always requisite, lest by endeavouring to avoid one evil we fall into a greater. Thin light crops, are without doubt, less liable to suffer by heavy rains and moist cloudy weather than weightier ones; but would it, on this account be advisable to regulate our cultivation by such a standard? Certainly not; at any rate, so far as my observation went, the thin light crop of last season did not escape more than the heavier ones. The diminutive heads on weak stalks, as well as the larger ones on stronger stalks, in parts of fields where the crop was thinner, were no better filled than where the crop was close and weighty; a striking instance of which occurred in one of my fields of about fourteen acres, where, from variety of soils, and different preparations, both descriptions were conspicuous. Eleven acres were sown on the 16th and 17th October, after potatoes and drilled beans; and three acres on the 22d and 23d February following, after turnips. Eight bushels of a particular

small variety of London seed was sown on about two and a half acres of potatoe ground, and also seven bushels of Kentish seed on potatoe ground adjoining that sown with wheat from London: the remainder of the ground being seeded with Kentish wheat once sown in this country. The plants from the London seed bairded equally, and as soon as they appeared above ground fully satisfied me, that, through the inattention of my servant too much seed had been given. The crop being obviously too thick, and screened on the west by a low hedge row of trees was lodged soon after shooting; and, as the head was short, small and soft, even when cut, I laid my account with a poor return, and gave up all thoughts of trying the produce as seed for next season.

It was however, carefully kept by itself, and threshed out in February, when, to my astonishment there were twenty six bolls two firlots of marketable grain, and six firlots of an inferior quality. The produce being so much above expectation, I was induced to sow a boll of it after turnips, as a further trial next season. The seven bushels that came from Kent being sown of a proper thickness, yielded stronger stems, and lodged less, than the former; but, though apparently a better crop, did not return so much by two bolls per acre; and as for the produce of the rest of the field, it came three and a half bolls short per acre, whether after potatoes or beans; that after beans being more soft and shrivelled than what was after potatoes, though it had the advantage of the deepest soil, which had been equally well dunged as the other parts the preceding year. Indeed the most gravelly and thin parts of the soil, in every field which I inspected, uniformly produced the hardest head, and best filled grain; and is a strong proof of the little effect the drought had in promoting the malady, as well as the little relief to be obtained by thin sowing, or withholding manure. In my field the produce in turnips was better in quality, though less in quantity than after potatoes, but fully more than after drilled beans.

The singular phenomenon of whole fields in particular districts being instantaneously deprived of vegetation, appears from many circumstances, to have been occasioned by the electric fluid which the clouds at that period emitted in remarkable quantities; particularly when we reflect that no other means, hitherto experienced was competent to that effect, except frost; and it is evident that frost could not have accomplished what took place, without manifest injury to, if not total destruction of various other kinds of crops, especially potatoes, which though liable to damage from even slight degrees of frost, escaped without the smallest blemish. As to the partial injury which the wheat crop in general experienced, it seems to have proceeded from an excess of unfavourable filling weather, as a continuation of easterly hazy fogs never fail to retard the filling process, at times partially to arrest conception and maturation, and to bring rust and a dusky hue on all plants not in vigorous growth, which afterwards become a prey to animals that take possession of them. Heavy showers have the same effect; and, even in moist cloudy weather, grain is never fully matured. These causes combined, continuing to operate for several weeks as was the case last season were surely sufficient to accomplish (excepting the mortal blow alluded to as proceeding from electricity) all that took place without the aid of fungi maggots, &c; which seemingly were consequences rather than causes of disease. Neither does it appear that much could be ascribed to the effects of putrid effluvia arising from the ground. However ingenious this theory may be, it is not quite consonant with the sound, orthodox doctrine usually noted in the *Farmer's Magazine*. The probability rather is, that the meliorated state of the soil from being moistened after a long period of warm weather, had yielded an excess of nutriment in a degree somewhat similar to what prevents the filling of grain growing on dunghills, as well as the rank tufts often seen in fields, neither of which ever fill perfectly. In all these cases, the impediment so obviously owing

to excess of nourishment, as the grain is always better or worse filled, in proportion to the degree of luxuriance that appears. Besides, did the failure in these instances originate from pestilential vapours, how could the surrounding corns escape? And if the smoke that arises from the ground, when warmed and moistened, was possessed of deleterious powers, what would be the fate of tender barids in the months of May and June, when more of that vapour appears than at any other season of the year? Even the blotches, rust and fungi, seen on exuberant foliage, seem as likely to be formed by the action of the atmosphere upon the exudings and perspiration of plants, as is observable upon plants during severe frost, as from any vegetative principle drawing existance from plants. In the case of last season, much of the mischief has been ascribed to drought, from the crop being thereby affected before the commencement of rains. Nothing, however, came within my observation, nor has taken place since, which warrants such a conclusion; the grain on the driest parts of all fields in this neighbourhood having been better filled than those on deep earthy soils. Oats suffer sooner, and more, by heat, than any other grain; and yet we find those raised on the driest ground meal best.

A great degree of luxuriance is always unfavorable to the filling of grain, as superabundant nutriment, by too highly fostering the stems and foliage, not only postpones the stage of filling, but retards the process of the sap or mucilage in its conversion into grain. Few seasons have been more favourable to vegetation than the months of May and June last. Crops of all kinds thrive in an uncommon manner; and at the end of July, when the rains began to fall, the heated ground became so ameliorated by the moisture, as to yield nutriment in no small degree detrimental to the maturation of grain. This circumstance, and the long continuance of most unfavorable weather afterwards, were abundantly sufficient, without the aid of putridity, to effect all that came to pass. Besides, the injured state of

most other plants at that period, tends greatly to confirm this opinion ; for, had this supposed putrid quality existed to any extent in the atmosphere, other plants as well as corns, would have felt its baneful effects.

It is worthy of notice, that excessive luxuriance seldom proves advantageous to the crop ; and that is often promoted by a friableness in the soil, or a volatile quality in the manure—though neither of them, nor even both combined, are adequate to the production of weighty crops, while other preparations operate reversely. Theory has too much influence in forming systems, without attending to their bearings and consequences. The long partiality shewn in favor of clover len, as a preparatory step for a wheat crop, and the antipathy entertained against potatoes as a cleaning crop, are proofs that farmers are too often misled by improper systems and incorrect opinions. A wheat crop after clover, especially if the clover was sown with a crop, for which the land had not been summer fallowed, rarely succeeds ; and if it does succeed, the benefit gained may justly be reckoned inferior to what might have been obtained from taking a crop of oats ; whilst the soil will, in the latter case, be in a much more superior condition. With regard to potatoes, I am glad to remark, from the communications to Sir John Sinclair, that, it appears juster notions are now prevalent as to the utility of this crop than formerly. Wheat after potatoes is found less liable to disease than after fallow or beans, and equally productive. The experience of half a century, every year of which I have sown wheat after potatoes, enables me to speak with precision in favor of that mode of culture, having rarely, if ever, observed, that in following it, imperfect grain was obtained, whilst in four instances out of five, the produce was greater than procured in any other way. The straw of all grain which succeed potatoes, especially that of wheat is peculiarly clean, stiff and tough, standing the mill much better than what is raised in any other method ; hence it is plain, that wheat after

potatoes, continues in a healthy state, when other wheat is diseased and debilitated; and of course the culture of potatoes must be viewed as one of the best preparations for wheat with which we are acquainted.

I have long regretted, that from potatoes not keeping over one season, the culture of that valuable root should have been less followed than other crops; but, I flatter myself, that now when unfavorable prejudices against them are wearing away, their cultivation will be considerably extended, not only as a preparatory seed for wheat, but also as food for horses and cattle. Along with ruta бага, I hope that potatoes will soon be used for supporting farm stock, during the winter and spring months, to the great benefit of the animals, and the advantage of their owners.

Before I finish, allow me to state that the bad crop of wheat, in 1799 caused the woolly eared variety almost entirely to be given up; since which the smooth chaffed sorts have been generally used. I have doubts on the propriety of the change, because the woolly-eared kind had long been in vogue, and was considered to yield the greatest produce. The following fact perhaps merits some attention. A seed merchant in 1807, sent me seven bushels of English wheat, which was sown on part of a nine acre field that lay at a distance from my residence. This field had not been inspected during the foggy and rainy weather at the close of last summer; but when viewed afterwards, the part sown with English wheat, which turned out to be of the woolly eared variety, distinguished itself at half a mile's distance, by presenting a dark dusky appearance, the chaff being much blackened; notwithstanding these circumstances, the crop when threshed, yielded plumper grain, with less refuse, than what was obtained from the rest of the field; which, after all, might in some respect, be owing to the change of seed.

I am, yours &c.

T. S. S.

Mid Lothian, 1809.

Remarks by the Conductor of the Farmer's Magazine.

With much respect for our worthy friend, Mr. T. S. S. whose sentiments on Agriculture rarely differ from those uniformly maintained in this work, we are in duty bound to notice one or two passages in the above interesting and valuable communication; thinking, that when making them, his wonted consideration was asleep, and of course that our good friend had neglected to estimate the bearings and consequences of what he stated. In the first place we must allude to his comments on what we lately urged, respecting the causes of the calamity which affected the wheat crops of last season. That unfortunate calamity we always viewed as produced by atmospherical influence; and in particular, we considered putrid effluvia, or pestilential vapour, as the chief, though not the only agent of the mischief so widely and extensively sustained. It must be confessed that we do not observe any thing advanced by Mr. T. S. S. much calculated to produce a change of our sentiments. He, indeed, mentions another agent of mischief, namely, electrical fluid; and on this point we are at one with him, because the air when filled with electric fluid is never in a healthy state, but when an excess of nutriment is assigned as a cause of failure, we feel an inclination to shake our head and crave leave to remind our good friend, that the period was arrived when the growth of the parent plant had ceased, and that the young and tender grain needed only mild and kindly weather, to mature and bring it to perfection. Without reflecting upon these things, our good friend argues the point as if wheat plants were capable of growing forever; else, why does he assign excess of food to the roots and fibres, as the cause of mortality to the grain deposited in the cups of the ear; which is neither more nor less than saying that the crop was killed by a surfeit. Again he supposes if excessive heat, surrounded by excessive moisture, produced pestilential vapour, that other grains could not have escaped. That other grains suffered as well as wheat, is

well known. Our good friend also supposes, if vapour or effluvia possesses deleterious powers, that the young braid of grain would be cut off in May or June, when more of that vapour appears than at any other period of the season. To this we answer, That vapour produced in May or June, cannot have the same effect with that produced in July or August, because the heat is not then so great; consequently, when succeeded by heavy rains, the atmosphere cannot possibly be so much contaminated. But without laying any stress on this point, it is maintained, that though the crop when young, may not receive injury from putrid effluvia, (perhaps, on the contrary, it is thereby much benefited) it will always in a greater or lesser degree sustain injury, if the atmosphere is filled with such vapour, when the grain is in an embryo state; and that the extent of the injury will be regulated by the age or strength of the young grain, and the length of time in which the atmosphere continues sickly and unhealthy. The truth of what is maintained, is fully confirmed by what happened last season to the wheat crop; every field in the eastern counties of Scotland, those on the sea shore and upland districts excepted, having suffered in one respect or other, whilst fields on the shore, where the heat was moderated by sea breezes, were very little affected. Even wheats in the uplands were fully as good as usual. Now if electrical fluid and excess of nutriment occasioned the failure, unfortunately now too well ascertained, how comes it about that the influence of these causes was not felt as decisively upon the sea shore as in the internal districts? That they were not so decisively felt is well known to every man who has attended public markets; and can only be accounted for, by a reference to the cause condescended upon in this and former papers. After all, as the disease which affected wheat last year was of an abstruse nature, it is highly probable that more agents than one, were concerned; and this may be admitted without impugning, in the slightest manner, the opinion given by us on the subject.

The method of cleansing Silk, woollen and Cotton Goods without damage to the texture or colour.

[From the Transactions of the Society of Arts, &c.]

TAKE raw potatoes, in the state they are taken out of the earth; wash them well; then rub them on a grater over a vessel of clean water to a fine pulp, pass the liquid matter through a coarse sieve into another tub of clear water; let the mixture stand till the fine white particles of the potatoes are precipitated; then pour the mucilaginous liquor for use. The articles to be cleaned should then be laid upon a linen cloth on a table, and having provided a clean sponge, dip the sponge in the potatoe liquor and apply the sponge thus wet upon the article to be cleaned, and rub it well upon it with repeated portions of the potatoe liquor, till the dirt is perfectly separated; then wash the article in clean water several times to remove the loose dirt; it may afterwards be smoothed or dried.

Two middle-sized potatoes will be sufficient for a pint of water.

The white fecula which separates in making the mucilaginous liquor, will answer the purpose of tapioca, will make an useful nourishing food with soup or milk, or serve to make starch or hair powder.

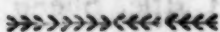
The coarse pulp, which does not pass the sieve, is of great service in cleaning worsted curtains, tapestry, carpets, or other coarse goods.

The mucilaginous liquor of the potatoe will clean all sorts of silk, cotton or woollen goods, without hurting the texture of the articles, or spoiling the colour.

It is also useful in cleansing oil paintings, or furniture that is soiled.

Dirty painted wainscot may be cleaned by wetting a sponge in the liquor, then dipping it in a little fine clean sand, and afterwards rubbing the wainscot therewith.

Various experiments were made by Mrs. Morris, in the presence of a committee, at the society's house; the whole process was performed before them upon fine & coarse goods of different fabrics, and to their satisfaction.

Columbian Agricultural Society.

At a meeting of the Standing Committee of the Columbian Agricultural Society, it was ordered,

1st. That the general meeting of the Society to be held in Georgetown on the 3d Wednesday of May Inst. be held at the Union Tavern at ten o'Clock A. M.

2nd That all articles of Manufacture, to be exhibited for premiums, on that day, be delivered to the Secretary at his House, or such place as he shall direct, on the evening preceeding the day of exhibition, before 8 o'clock; each article being marked or numbered, as the owner or exhibiter may think proper, and accompanied with a sealed letter, similarly marked or numbered, and containing the name of the owner or exhibiter.

3d. That all the cattle to be exhibited for Premiums be delivered to the Secretary or his agents, before 9 o'clock on the morning of the exhibition, and at such place as shall be prescribed.

4th. That John Mason and John Threlkeld together with the Secretary, be appointed a Committee of Arrangement to procure a suitable place for the Exhibition of Manufactures, and proper Lots and Enclosures for the Cattle; to provide and distribute Tickets for the admission of Members of the Society and their families, and such other Ladies and Gentlemen as they may deem proper, and to do and direct such other things as may be judged adviseable, previously to the exhibition.

5th. That George Calvert, John Cox, Nathan Lufborough, John W. Bronaugh, and Tench Ringgold be appointed Managers for the day—And it was

Resolved, That no premium shall be adjudged to any person, if the judges shall not consider the Animal or Article exhibited, of such quality as to merit premium.

And to afford still further encouragement to Farmers, and Manufacturers, it was Resolved, That all those who

may have for sale, Cattle, Sheep or any articles of Domestic Manufacture, be invited to bring them to the Exhibition—that convenient opportunity be afforded to exhibit them to public notice—that stands, proper inclosures, and other accommodations, be provided for them, and that those who choose it, have the benefit of a public Auction, on the evening of the exhibition, and on the succeeding day and at an early hour; it being understood that the Auctioneer be paid by the seller, a moderate per centage on the amount of all articles actually sold, and that the owners be at the expence of provender and attendance for their Cattle and Sheep.

The Standing Committee then adjourned to meet again at the Union Tavern in Georgetown, on the morning of the General Meeting and Exhibition, at 9 o'clock.

David Wiley, Sec'ry.

Georgetown, May 6th, 1811.

Arlington Sheep Shearing.

The anniversary of the Arlington Sheep Shearing on Tuesday the 30th of April was attended by a numerous and respectable company of Gentlemen, of whom several were from a distance.

The exhibition was held in a large circular arbor, including a smaller inclosure, appropriated to the judges and strangers.

The Premium for Cloth of Domestic Manufacture, was adjudged to Mrs. Ann Sowden of Prince William County—

The Premium Cup for the best Tup-Lamb, was adjudged to John C. Scott, of Strawberry Vale, Fairfax County; and the Prize for Ewes, to Daniel McCarty Chichester, of Fairfax County, all of Virginia.

The patriotic efforts and hospitality of Mr. Custis, on this occasion, are entitled to the greatest credit.

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